	Application No.	Applicant(s)
Notice of Allowability	09/922,617	JACOBS ET AL.
	Examiner	Art Unit	
	Cam Y T Truong	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *1/24/2005*.

2. ☒ The allowed claim(s) is/are *1,3-8,12-21 and 23-25*.

3. ☒ The drawings filed on *04 August 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

      Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

SHAHID ALAM
PRIMARY EXAMINER

DETAILED ACTION

1.   Applicant has amended claims 1, 3, 6, 13, 18, 19, 20, 23 and canceled

claims 2, 22, 26-27 in the amendment filed1/24/2005. Claims 1, 3-21, 23-25 are

pending in this Office Action.

EXAMINER'S AMENDMENT

2.   An examiner's amendment to the record appears below. Should the

changes and/or additions be unacceptable to applicant, an amendment may be

filed as provided by 37 CFR 1.312. To ensure consideration of such an

amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Attorney Edward J. Grundler. Reg. No. 47,615 on 3/2/2005

In the claims:

Please replace original claims 1, 6, 13, 18, 19 and 20 with amended claims 1, 6,

13, 18, 19 and 20 and cancel claims 9-11.

1. (Currently amended) A method of automatically invalidating data cached in a

cache system physically separate from a data server configured to originate

data to be cache system, the method comprising:

at a cache system physically separate from a data server configured to

originate data to be cached in the cache system, caching a first data item

received from the data server for service in response to request to view said

first data item;

receiving at the cache system a change request from a client to alter a data

item;

comparing said change request to a set of rules for determining when to

automatically invalidate said first data item;

identifying a relationship between a second data item and a first data item,

wherein said identifying a relationship comprises comparing a pattern of said

first request to a first rule for determining when to automatically invalidate a

set of data, wherein said first rule comprises a first pattern for identifying a

request in response to which a set of data may be automatically invalidated,

and further comprises a second pattern, different from said first pattern, to

identify said set of data to be automatically invalidated; and

automatically invalidating said first data item at the cache system in response

to said change request.

6. (Currently amended) A method of operating a cache system to facilitate

automatic invalidation of cached data, the method being performed at the

cache system and comprising:

at a cache system physically separate from a data server configured to

originate data to be cached in the cached system, caching a first set of data

received from the data server;

receiving at the cache system a first request from a client to change a second

set of data;

retrieving from said first request an identifier of said second set of data;

comparing said first request to a set of rules for determining when to

automatically invalidate said first set of data;

identifying a relationship between said second set of data and said first set of

data, wherein said identifying a relationship comprises comparing a pattern of

said first request to a first rule for determining when to automatically invalidate

a set of data, where said first rule comprises a first pattern for identifying a

request in response to which a set of data may be automatically invalidated,

and further comprises a second pattern, different from said first pattern, to

identify said set of data to be automatically invalidated;

automatically invalidating said first set of data in the cache system without

awaiting an invalidating communication from the data server.

13. (Currently amended) A method of automatically invalidating cached data,

comprising:

at a cache system physically separate from a data server configured to

originate data to be cached in the cache system, caching a first set of data at

a caching system for serving in response to a view request, wherein said view

request comprises a request to view said first set of data, and wherein said

first set of data is received from a data server;

receiving at the caching system a change request from a client, wherein said

change request comprises a request to change said first set of data;

identifying said first set of data from said change request;

identifying a relationship between a second data item and a first data item, wherein said identifying a relationship comprises comparing a pattern of said first request to a first rule for determining when to automatically invalidate a set of data, wherein said first rule comprises a first pattern for identifying a request in response to which a set of data may be automatically invalidated, and further comprises a second pattern, different from said first pattern, to identify said set of data to be automatically invalidated;

comparing said change request to a set of rules for determining when to automatically invalidate said first set of data;

18. (Currently Amended) A computer readable storage medium storing instructions that, when executed by a computing device, cause the computing device to perform a method of operating a cache system to facilitate automatic invalidation of cached data, the method being performed at the cache system and comprising:

at a cache system physically separate from a data server configured to originate data to be cached in the cache system, caching a first set of data received from the data server;

receiving at the cache system a first request from a client to change a second set of data;

retrieving from said first request an identifier of said second set of data;

comparing said change request to a set of rules for determining when to

automatically invalidate said first set of data;

identifying a relationship between said second set of data and said first set of

data, wherein said identifying a relationship comprises comparing a pattern of

said first request to a first rule for determining when to automatically invalidate

a set of data, where said first rule comprises a first pattern for identifying a

request in response to which a set of data may be automatically invalidated,

and further comprises a second pattern, different from said first pattern, to

identify said set of data to be automatically invalidated;

automatically invalidating said first set of data in the cache system without

awaiting an invalidation communication form the data server.

19.   (Currently Amended) A computer readable storage medium storing

instructions that, when executed by a computing device to perform a method

of automatically invalidating cached data, the method comprising:

at a cache system physically separate from a data server configured to

originate data to be cached in the cache system, caching a first set of data at

a caching system for serving in response to a view request, wherein said view

request comprises a request to view said first set of data, and wherein said

first ser of data is received from a data server;

receiving at the caching system a change request from a client, wherein said

change request comprises a request to change said first set of data;

identifying said first set of data from said change request;

comparing said change request to a set of rules for determining when to

automatically invalidate said first set of data;

identifying a relationship between a second set of data and said first set of

data, wherein said identifying a relationship comprises comparing a pattern of

said first request to a first rule for determining when to automatically invalidate

a set of data, where said first rule comprises a first pattern for identifying a

request in response to which a set of data may be automatically invalidated,

and further comprises a second pattern, different from said first pattern, to

identify said set of data to be automatically invalidated;

automatically invalidating said cached first set of data without for the data

server to implement said change request, wherein invalidating said cached

first set of data is in response to the view request.

20. (Currently Amended) A cache system configured to automatically

invalidate cached data, comprising:

a first cache configured to cache data received from a data server, wherein

said first cache is separate from said data server, and wherein the data server

is coupled to the cache system via a network link;

a data service module configured to server a first set of cached data in

response to a first data view request from a client;

a set of rules for determining when said first set of cached data is to be

automatically invalidated in response to a data change request;

a comparing module for comparing said first data change request to the set of

rules for determining when to automatically invalidate said first set of cached

data;

identifying a relationship between a second set of data and said first set of

data, wherein said identifying a relationship comprises comparing a pattern of

said first request to a first rule for determining when to automatically invalidate

a set of data, where said first rule comprises a first pattern for identifying a

request in response to which a set of data may be automatically invalidated,

and further comprises a second pattern, different from said first pattern, to

identify said set of data to be automatically invalidated;

an invalidation module configured to automatically invalidate said first set of

cached data when a first data change request is received from a client;

wherein said automatic invalidation is performed at the cache system before

the data server is notified of said first data change request.

Allowable Subject Matter

3.   Claims 1, 3-5, 6-8, 12-25 are allowed.

The prior art of record, alone or in combination, does not teach or fairly

suggest the combination of steps as recited in independent claims 1, 6, 13,

18, 19 and 20, wherein "a comparing module for comparing said first data

change request to the set of rules for determining when to automatically

invalidate said first set of cached data; where said first rule comprises a first

pattern for identifying a request in response to which a set of data may be

automatically invalidated, and further comprises a second pattern, different

from said first pattern, to identify said set of data to be automatically

invalidated; at a cache system physically separate from a data server

configured to originate data to be cached in the cached system".

The dependent claims, bring definite, further limiting, and fully enabled by the
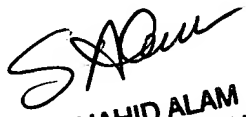
specification are also allowed.

Contact Information

4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Cam Y T Truong whose telephone number is (571) 272-

4042. The examiner can normally be reached on Monday to Firday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Breene can be reached on (571) 272-4107. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Cam-Y Truong
3/2/2005

SHAHID ALAM
PRIMARY EXAMINER